Buccaneer Alaska Operating, LLC
952 Echo Lane - Suite 420
Houston, TX 77024
(281) 768-7652

12 April 2011

Ms. Hanh Shaw
State Oversight, Stormwater, Small Programs NPDES Permits Unit, Team Lead
United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900, OWW-130
Seattle, Washington 98101

RE: Notice of Intent (NOI), NPDES General Permit AKG-31-5000
Buccaneer Alaska Operations, LLC, Cook Inlet Exploratory Drilling Program

Dear Ms. Shaw:

Providing Notice of Intent

Buccaneer Alaska Operations, LLC (Buccaneer) is providing a notice of intent (NOI) for coverage under NPDES General Permit AKG-31-5000 (AKG-31-5000) for oil and gas exploration drilling in State of Alaska coastal inland waters of the upper Cook Inlet. Buccaneer proposes that drilling will be conducted during summer (open water) drilling seasons utilizing the Adriatic XI, a Marathon LeTourneau Class 116-C type jackup rig.

The purpose of the permit application is to allow Buccaneer to conduct drilling activities in coastal inland waters starting in August 2011. This drilling program will consist of four wells. Buccaneer hereby submits this NOI to satisfy the requirements of 40 CFR Part 435, Subparts A and D.

Completion of the NOI information is being provided by Buccaneer as prescribed by Permit AKG-31-5000. This includes preparing and submitting the following:

- NOI Information Sheet
- Best Management Practices Plan (Attachment 1)
- Plan of Operations (Attachment 2)

Clarifications and Questions as Follow-up to 21 March Teleconference

Further our recent teleconference, I have summarized permit discussions requiring EPA clarification per your request.

Question: Is Jackup "Pre-load" Water Considered to be Outfall 010: Uncontaminated Ballast Water?
Mobilization to Cook Inlet and then between well locations is as follows:

- **Dry haul to Cook Inlet.** The jackup rig will be "dry-hauled" by semi-submersible heavy lift vessel (HLV) from its current location to lower Cook Inlet where it will be offloaded.

  Prior to arriving in lower Cook Inlet, the pre-load tanks on the jackup rig will be cleaned and will not contain invasive species. At this juncture, the jackup rig is considered cargo.

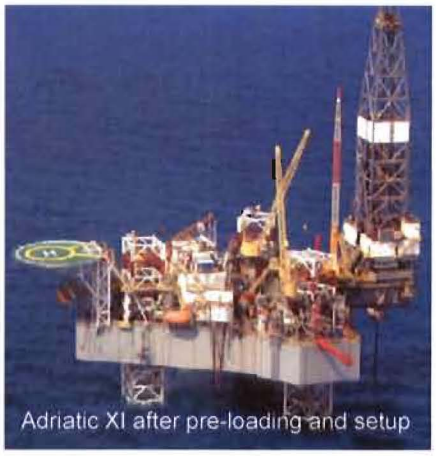
- **Wet-tow to and between well locations.** The jackup will then be "wet-towed" from lower Cook Inlet to the first well location in upper Cook Inlet by ocean-going tugs. It will then be wet-towed between locations and moorage until the end of the project.

  During wet tows, the jackup rig is considered a barge or vessel, complete with IMO number and ABS classification and is regulated by the USCG. At this point, the pre-load tanks are still clean and empty.


Adriatic XI underway by HLV


Jackup rig under wet tow

- **Pre-loading at each well location (as required by insurance).** Once on site, the jackup legs will be lowered to the seafloor and "pre-loading" will commence. Pre-loading consists of filling on-board pre-load tanks with about 150,000 barrels of Cook Inlet seawater which allows the legs to penetrate unconsolidated sediments and set on either bedrock or consolidated sediments with sufficient bearing capacity. This ensures there is no footing reaction during drilling operations. After the legs are set on firm footing, the pre-load water will be discharged and the rig "jacked up" about 50 feet above expected high tides. A typical pre-load /discharge cycle takes from 8 to 14 hours, and will be done once at each well location. Pre-loading is an underwriter's insurance requirement that all jackup rigs must meet prior to operations. Variance from this stringent insurance requirement can be obtained, but generally requires a fairly exhaustive geotechnical investigation prior to rig setup.

  
  Adriatic XI after pre-loading and setup

  Therefore, a total of four pre-loads will be done over the course of three drilling seasons, at a frequency of one or two times per year.

Once the jackup legs are lowered and touch the seafloor, but prior to pre-loading, the "vessel" becomes a jackup rig that is now regulated by the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE).

Regulation by BOEMRE (and not USCG) at this juncture leads to the following question: is pre-load water from a jackup rig that is not used as ballast, considered an Outfall 010 Uncontaminated Ballast Water discharge?

Clarification: Need for and Schedule for WET Analysis Monitoring of Outfall 010 Discharge

- **Need for WET Analysis.** If the EPA confirms that pre-load water (Cook Inlet seawater) is an Outfall 010 discharge, then NPDES Section II.F.1 of AKG-31-5000 requires WET analysis of the discharge IF chemical additives have been added.

  Chemical additives will not be used during the pre-loading process. Therefore, Buccaneer requests confirmation and clarification that WET analysis will not be required for Outfall 010 discharge.

- **Schedule for WET Analysis (if required).** If the EPA requires WET analysis of Outfall 010 discharge, the Section II.6.a.1 requires quarterly WET analysis monitoring followed by once per six months after the first year.

  Pre-loading will only occur infrequently once or twice per year. Therefore, Buccaneer requests clarification on a WET analysis monitoring schedule.

Confirmation: Outfall 010 Discharge can occur at Southern Cross Unit #1 (SCU#1) when water is >32.8 feet.

Section I.C.1 prohibits discharging seaward of the 10 meter (32.8 feet) MLLW isobath. This prohibition does not take into consideration upper Cook Inlet tides that range up to 23 feet. The SCU#1 well location is in 18 feet at MLLW. During the proposed drilling season, water depth at high tide will be about 43 feet. Buccaneer plans on discharging pre-load water only when water depth at the site is >32.8 feet.

Buccaneer requests EPA approval/confirmation that discharge can occur at this well location in >32.8 feet water depth.

If you have questions, please contact me at (281) 768-7652 or Rob Crotty / Cardno ENTRIX at (907) 563-0438.

Best Regards,

Andy Rike
Executive Vice President – Operations
Buccaneer Alaska Operations, LLC
952 Echo Lane - Suite 420
Houston, TX 77024
Direct: (281) 768-7652
Cellular: (214) 738-6945
ARike@buccaneerresources.com

Cc: Nina Brudie, ADNR/DCOM

Attachments: Buccaneer NOI Information Sheet
Best Management Practices Plan (NOI Attachment 1)
Buccaneer Plan of Operations (NOI Attachment 2)

Buccaneer Notice of Intent (NOI) Information Sheet: NPDES General Permit AKG-31-5000

Part I.D.3 - A complete NOI must contain the following information as illustrated in Appendix E: Information Sheet.

Additional information on the jackup rig, facility contacts, and the latitude and longitude of the initial exploration well (plus the following four exploration wells) is presented below.

Applicant (Owner/Operator)

Owner Name:	Buccaneer Alaska Operations, LLC
Telephone Number:	Direct: (281) 768-7652 Cellular: (214) 738-6945
Operator:	Buccaneer Alaska Operations, LLC
Telephone Number:	Direct: (281) 768-7652 Cellular: (214) 738-6945
Operator Mailing Address:	952 Echo Lane - Suite 420 Houston, TX 77024

Facility

Facility Name:	Adriatic XI or similar class jackup rig
Contact Name:	Andy Rike, Buccaneer Alaska Operations, LLC
Telephone Number:	Direct: (281) 768-7652
Beginning Date of Operation:	August 1, 2011
Expected Duration of Operation:	Up to 1095 days
Facility Type:	Marathon LaTourneau Class 116-C Jackup Rig

Mobile Facilities

Initial Latitude (Southern Cross Unit #1):	60° 51' 12.03323"N
Initial Longitude (Southern Cross Unit #1):	151° 28' 11.64709"W

Buccaneer is requesting permit coverage as a mobile facility, operating in the upper Cook Inlet area (Figure 1 for a map of the area of coverage). General operations in north upper Cook Inlet are shown in Figures 1 and 2; nautical chart site maps showing specific areas of operation (unit boundaries, leases and well locations) are provided as Figures 3 through 6. Operations within these areas include drilling four exploration wells at locations by using a jackup rig. A drilling timeline is presented in Figure 7.

Locations for the four Buccaneer wells are:

- More than 4000 meters from prohibited shoreline areas of discharge (Figure 2)
- In coastal waters where exploration facilities are authorized under the general permit (Figures 1 and 3 to 6).
- North of the northern edge of Kalgin Island (Figures 1 and 2) which is the "Proposed General Operating Area of Coverage."
- Not in prohibited areas of discharge set forth in AKG-31-5000.I.C

Receiving Water – Cook Inlet

Coastal Waters only

Locations of Discharge

Information on locations of discharge for proposed well locations within General Operating Area is provided in Table 1.

Table 1: Proposed Well Location Information			
Southern Cross Unit #1 (SCU#1)	**Southern Cross Unit #2 (SCU#2)**	**Northwest Cook Inlet Unit #1 (NCIU#1)**	**Northwest Cook Inlet Unit #2 (NCIU#1)**
State Oil and Gas Leases:			
ADL 17595-2	ADL 391108	ADL 391270	ADL 391611
Legal Description, Seward Meridian:			
Township 9N, Range 12W, Section 19	Township 9N, Range 12W, Section 8	Township 12N, Range 9W, Section 20	Township 12N, Range 10W, Section 25
Geodetic Position, Latitude/Longitude:			
60° 51' 12.03323"N / -151° 28' 11.64709"W	60° 53' 7.92809"N / -151° 26' 22.23094"W	61° 7' 9.51176"N / -150° 55' 6.24277"W	61°5'55.46583"N / -150° 58' 46.05897"W
Alaska State Plane Coordinates, Zone 4, NAD27 (ASP4):			
237,895X / 2,506,775Y	243,575X / 2,518,420Y	337,595X / 2,602,200Y	326,685X / 2,594,840Y
Mean Lower Low Water (MLLW) Depths at Well Locations (from NOAA Chart 16663):			
18 feet	33 feet	72 feet	69 feet
Range of MLLW Depths in the ADL Lease Block (from NOAA Chart 16663):			
2-84 feet	72-234 feet	54-66	54-90

Discharges

Applicable discharges are limited to Uncontaminated Ballast Water (Discharge 010) in the form of Cook Inlet seawater used in pre-loading during rig installation.

Information on water depths at each well location where discharge will take place is summarized in Table 2.

Table 2: Water Depth at Proposed Well Locations (from NOAA Chart 16663)			
SCU#1	**SCU#2**	**NCIU#1**	**NCIU#2**
>32.8 feet	33 feet	72 feet	69 feet

There will be no other discharges from the exploration facility that are regulated by NPDES General Permit AKG-31-5000.

Type of Sanitary Discharge

None. Sanitary discharge will be transported to and disposed onshore at approved disposal facilities.

Treatment Process(es) and Disposal Practices

Table 3 provides a brief description of the treatment process(es) and disposal practices.

Flow Diagram of Discharge Waste Streams:

Treatment process flow diagrams are provided in Figures 7 and 8. Waste and potential discharges (outfalls) associated with the project are further described in attached Table 4. The treatment process flow diagrams (Figures 7 and 8) include intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 to 019) where applicable. Table 2 includes information the nature and amount of discharges and/or waste, as well as collection, storage, disposal and/or treatment measures.

Table 3: Adriatic XI Drilling-Related Waste Management Plan			
Discharge Type	**General Waste Composition**	**Estimated Volume**	**Storage/Disposal**
001 Drilling Mud and Cuttings	Water-based drill fluids and cuttings in non-hydrocarbon zones	16,000 bbls/well	**No discharge.** Transfer to support vessel, deliver to shore, and dispose at approved and regulated facility.
001 Drilling Mud and Cuttings	Water-based drill fluids and cuttings in hydrocarbon zones	16,000 bbls/well	**No discharge.** Same as above.
002 Deck Drainage	Deck washings, and stormwater found in drip pans or deck secondary containments	5 bbls/event	**No discharge.** Same as above.
003 Sanitary Waste	Human body waste from toilets and urinals	4 bbls/day	**No discharge.** Same as above.
004 Domestic Waste	Water from sinks, showers, laundries, safety showers, eyewash stations, hand-wash stations, galleys	40 bbls/day	**No discharge.** Same as above.
005 Desalination Unit Waste	Wastewater associated with the process of creating fresh water from seawater	None generated	**No unit on board.**
006 Blowout Preventer Fluid	Fluids generated to actuate hydraulic equipment on the blowout preventer	5 bbls/event	**No discharge.** Transfer to support vessel, deliver to shore, and dispose at approved and regulated facility.
007 Boiler Blowdown	Water, fluids and minerals drained from boiler drums	100 bbls/day	**No discharge.** Same as above..
008 Fire Control System Test Water	Water released fire protection, testing and maintenance of fire protection equipment	10 bbls/event	**No discharge.** Same as above.
009 Non-Contact Cooling Water	Once-through non-contact cooling water	None generated	**No discharge.** Closed loop cooling system.
010 Uncontaminated Ballast Water	Seawater used to maintain proper ballast float level and ship draft	~ 150,000 bbls during pre-loading	Discharge to Cook Inlet into >32.8 feet water depth.
011 Bilge Water	Fresh and seawater collected in the lower internal parts of the drilling vessel hull	10 bbls/day	**No discharge.** Transfer to support vessel, deliver to shore, and dispose at approved and regulated facility.
012 Excess Cement Slurry	Excess cement and wastes from equipment washdown after a cementing operation	100 bbls/casing interval	**No discharge.** Same as above.
013 Muds, Cuttings, Cement at Seafloor	Water-based muds and cement	None generated	**NA**. Muds or cements contained within at least two casing strings at seafloor.
014 Waterflooding Discharges	Fluids (generally water) used to increase oil producton	0 bbls/day	**No discharge**. Not included in exploration program
015 Produced Water and Sand	Formational water and sand produced during production.	0 bbls	**No discharge**. Not included in exploration program
017 Workover Fluids	Drilling fluids used during workover of a production well.	0 bbls	**No discharge**. Not included in exploration program
018 Well Treatment Fluids	Fluids used to increase production.	0 bbls	**No discharge**. Not included in exploration program
019 Test Fluids	Fluids (generally crude oil and water) generated during well testing after drilling.	<1,500 bbls/day	**No discharge.** Transfer to support vessel to deliver to shore for sale at Tesoro Refinery in Nikiski or recycle.

Drilling Fluids (Will not be discharged)

Category (Check all that apply):	*Group (Check all that apply):*
►Water-based	Lignosulfonate
►Oil-based	Lime
Synthetic-based	Gyp
Other	►Sea Water (will not be discharged)
	►Saltwater (not discharged)
	►Saturated Saltwater (will not be discharged)
	►Nondispersed Viscosifeir/Polymer (not discharged))

Estimated Drilling Fluid Discharge: **0 bbls/well** (No discharge)

Estimated Total Discharge Volume/Well: Estimated total discharge volume of Outfall 010 will be about 150,000 barrels of uncontaminated Cook Inlet seawater during each pre-loading event. See Table 3 above for volumes of other regulated discharges that will not be discharged as part of Buccaneer's drilling operations.

100-Meter Mixing Zone Request: A mixing zone is not being requested from ADEC. Sanitary discharges will be transported and disposed of onshore at approved disposal facilities.

Special Conditions:

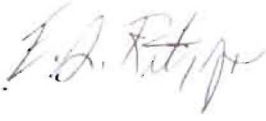
(Provide justification for all that are not required, completed or provided)

Special Monitoring:	(Not Required within Alaska coastal waters)
Exploration Plans:	(Attachment 2 to NOI Info Fact Sheet)
Biological Survey(s):	(Not Required within Alaska coastal waters)
Environmental Reports(s):	(Not Required within Alaska coastal waters)
Drilling Fluid Plan:	(Not required; no drilling fluids discharged)
Environmental Monitoring Study Plan (II.B.5):	(Not required; no drilling fluids discharged)
Best Management Practices Plan (IV.A):	(Attachment 1 to NOI Info Fact Sheet)

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete, I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Based on my signature below, I also certify that a Best Management Practices (BMP) Plan for this facility is complete, with a copy on-site and available upon request by EPA. The BMP includes this NPDES permit number and is signed by an authorized representative of Buccaneer.

Signature:  Date: April 11, 2011

Printed Name: Andy Rike Title: Executive Vice President - Operations

Mail Completed NOI to EPA and ADEC at the following addresses:

USEPA
1200 6th Avenue, Suite 900, M/S OWW-130
Seattle, WA 98101

ADEC, Water Division
555 Cordova Street
Anchorage, Alaska 99501

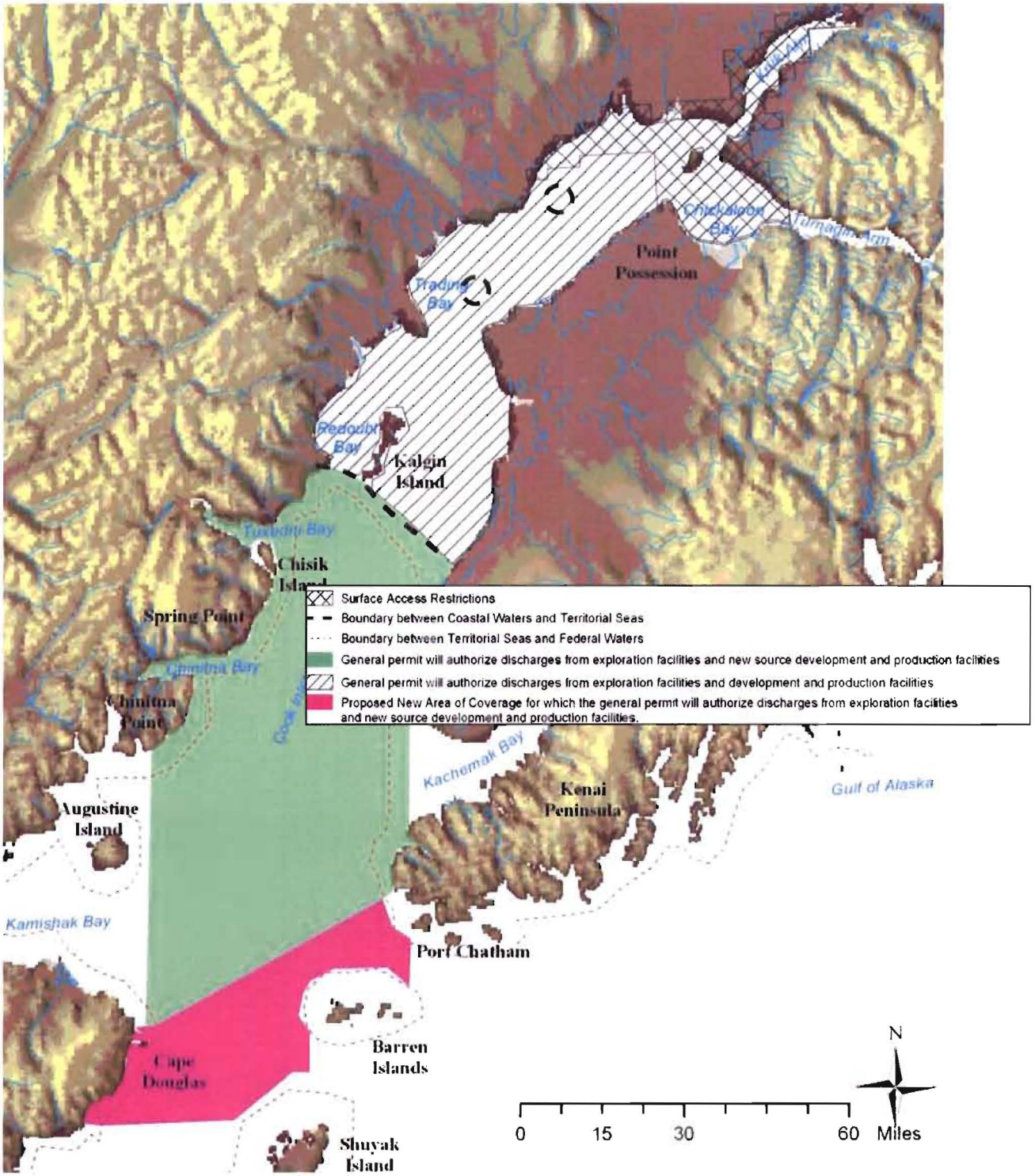
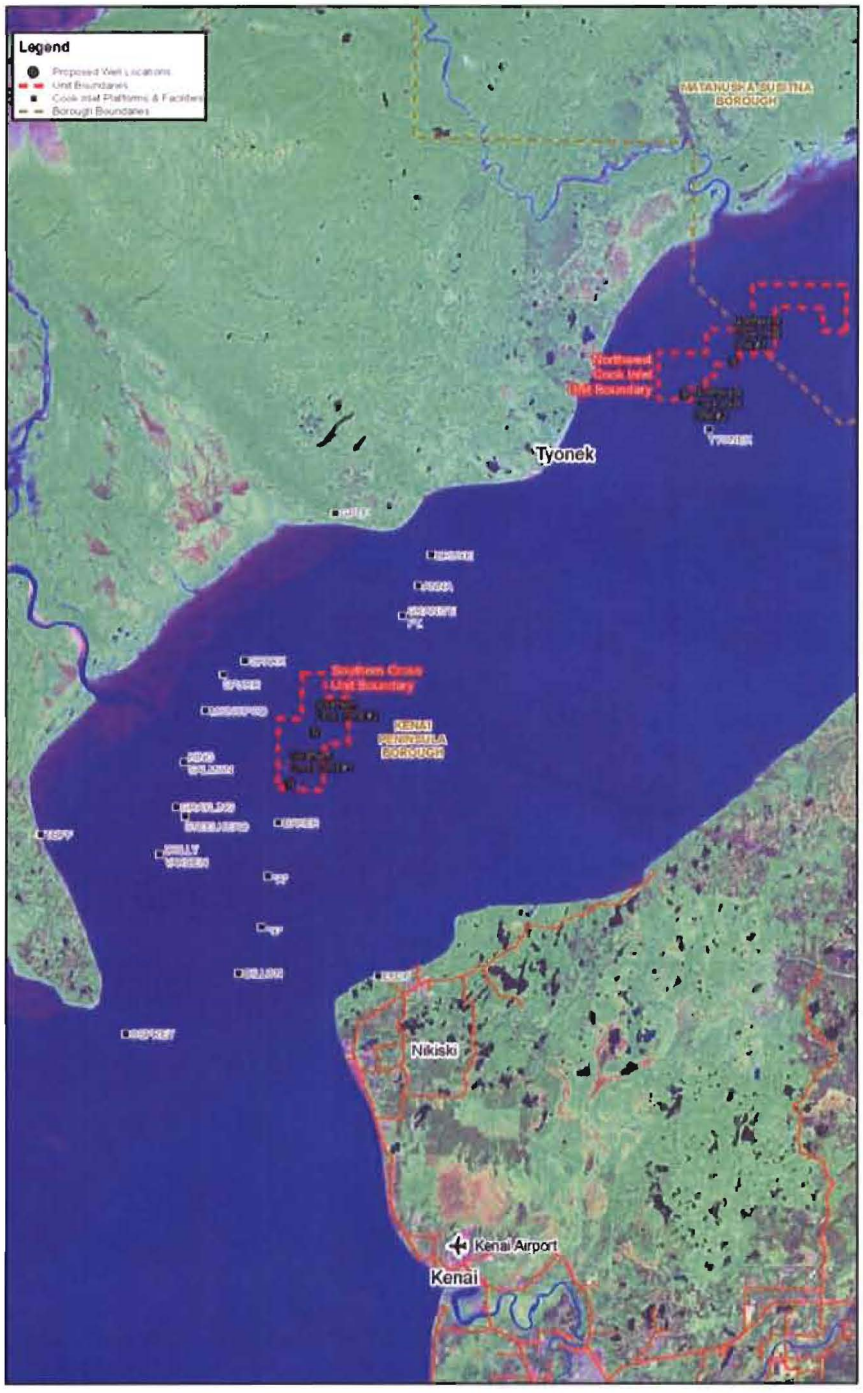


Figure 1
AKG-31-5000 General Area of Coverage



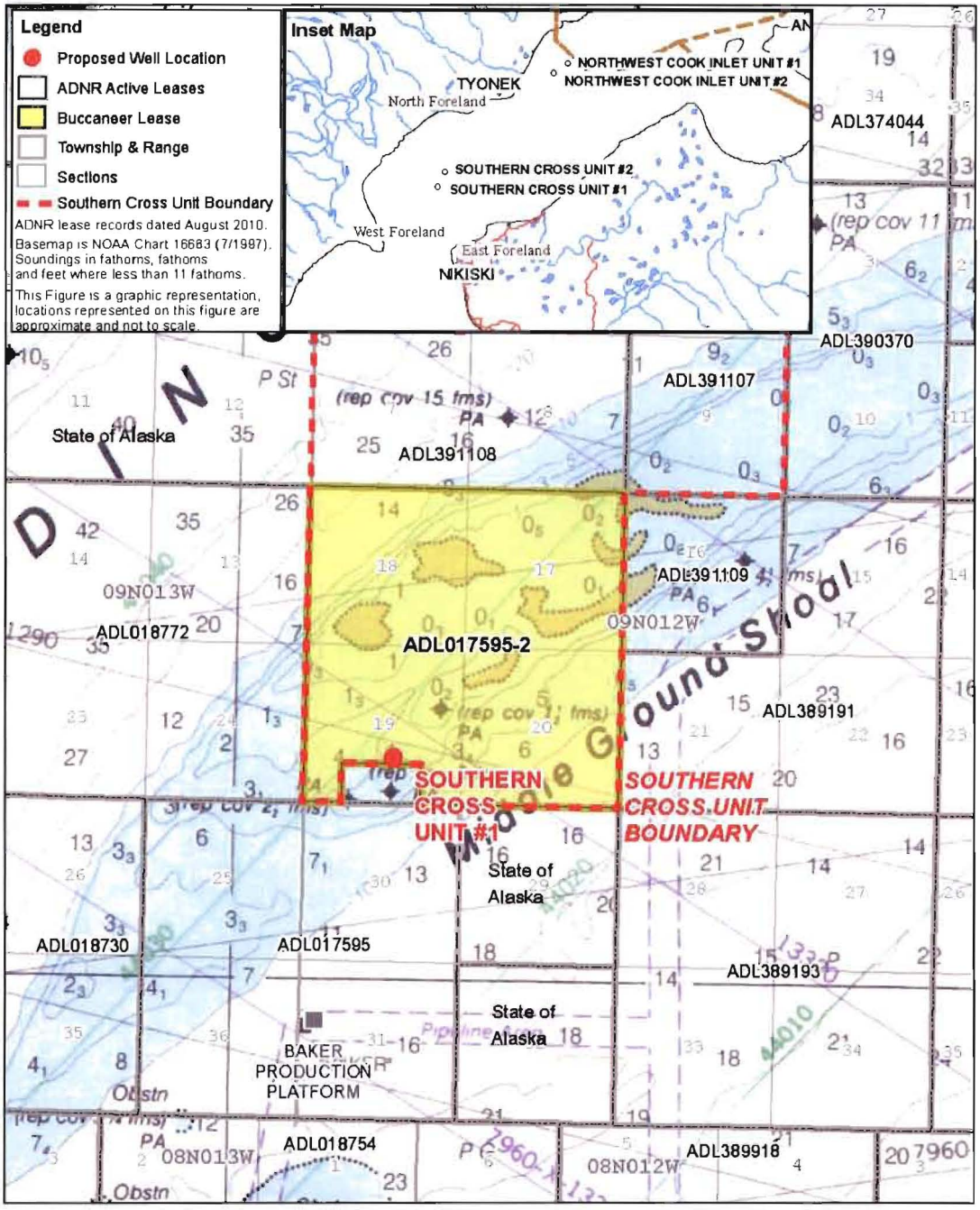
BUCCANEER ALASKA, LLC

5 2.5 0 5
Miles

NORTH

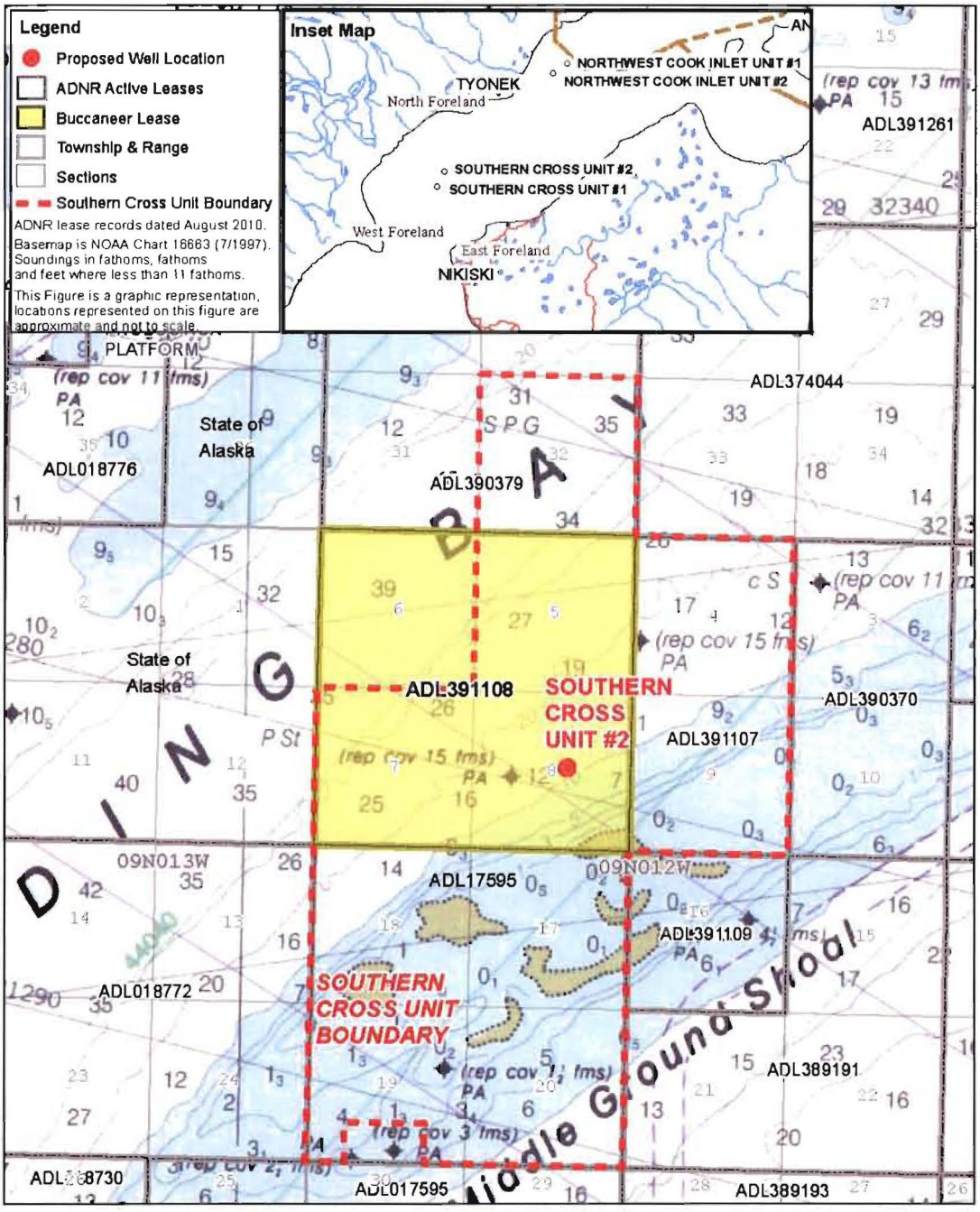
BUCCANEER ALASKA

FIGURE 2
Buccaneer Project
Location Map
Revised February 7, 2011



BUCCANEER ALASKA, LLC

FIGURE 3
Nautical Chart of Well Location
Southern Cross Unit #1
60.853343 N, -151.469902 W
Revised March 8, 2011



BUCCANEER ALASKA, LLC

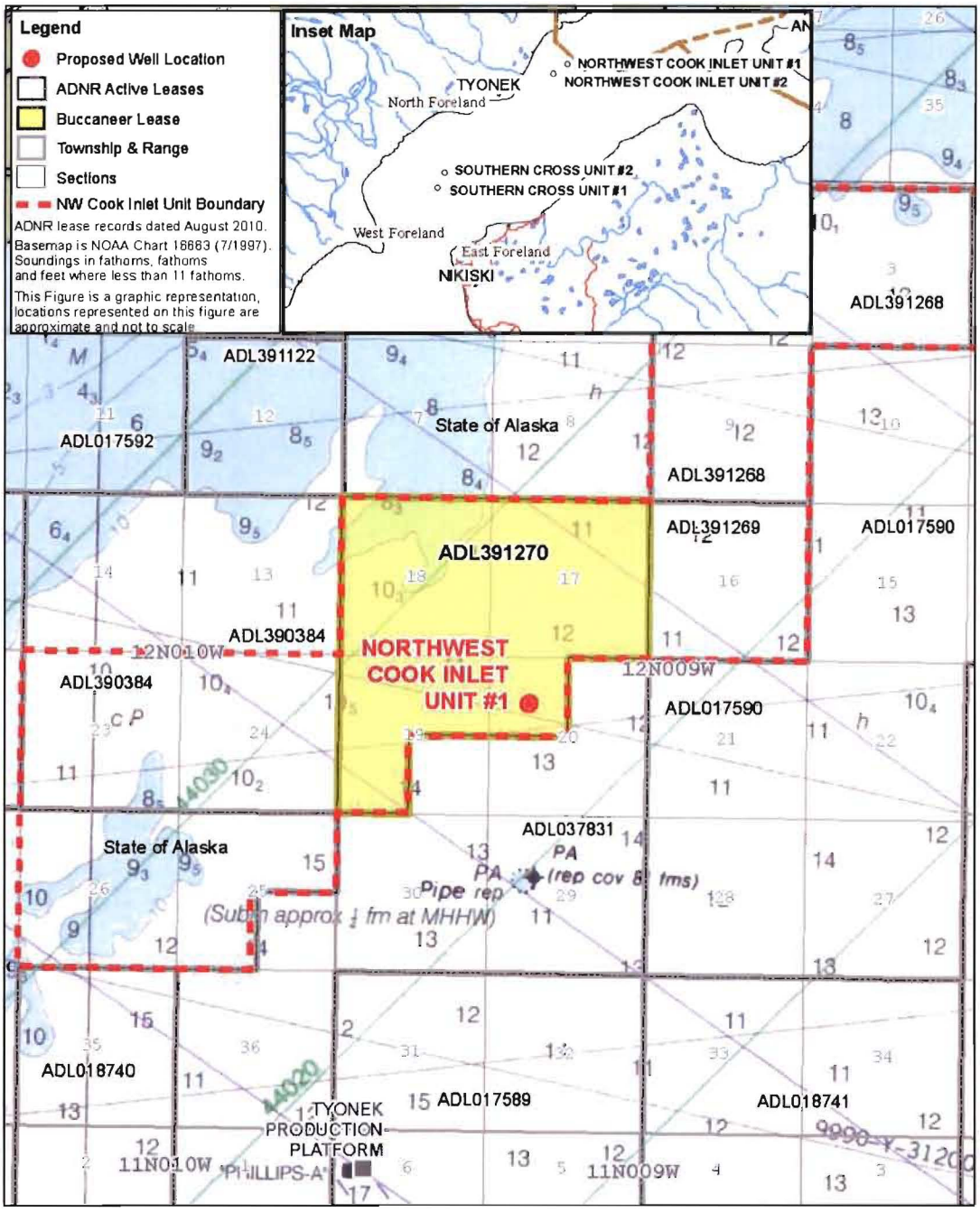
FIGURE 4

Nautical Chart of Well Location

Southern Cross Unit #2

60.885536 N, 151.439509 W

Revised March 8, 2011



BUCCANEER ALASKA, LLC

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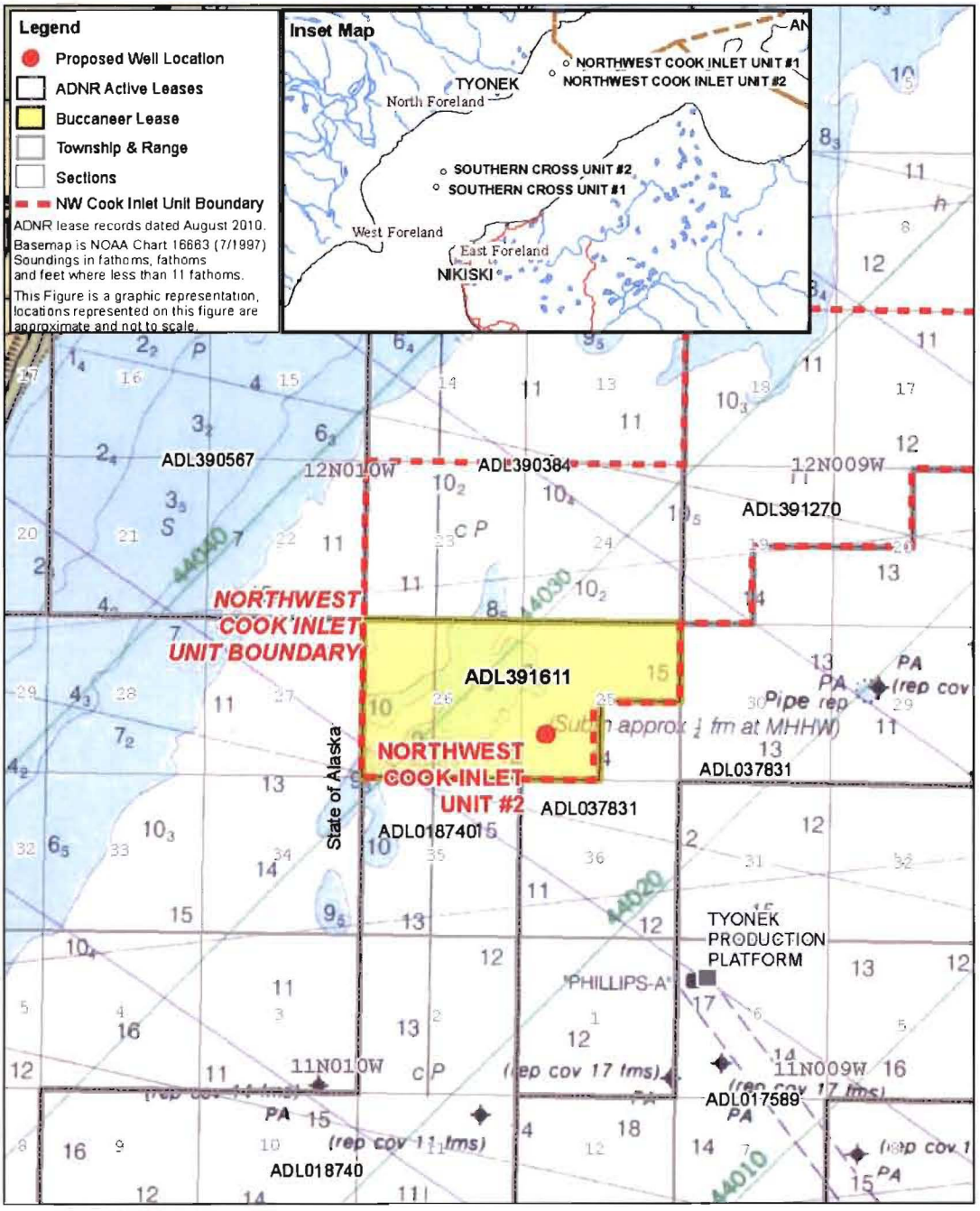
BUCCANEER ALASKA

FIGURE 5
Nautical Chart of Well Location
Northwest Cook Inlet Unit #1
61.119309 N, 150.918401 W
Revised March 8, 2011



BUCCANEER ALASKA, LLC

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FIGURE 6

Nautical Chart of Well Location
Northwest Cook Inlet Unit #2

61.098741 N, 150.979461 W

Revised March 8, 2011

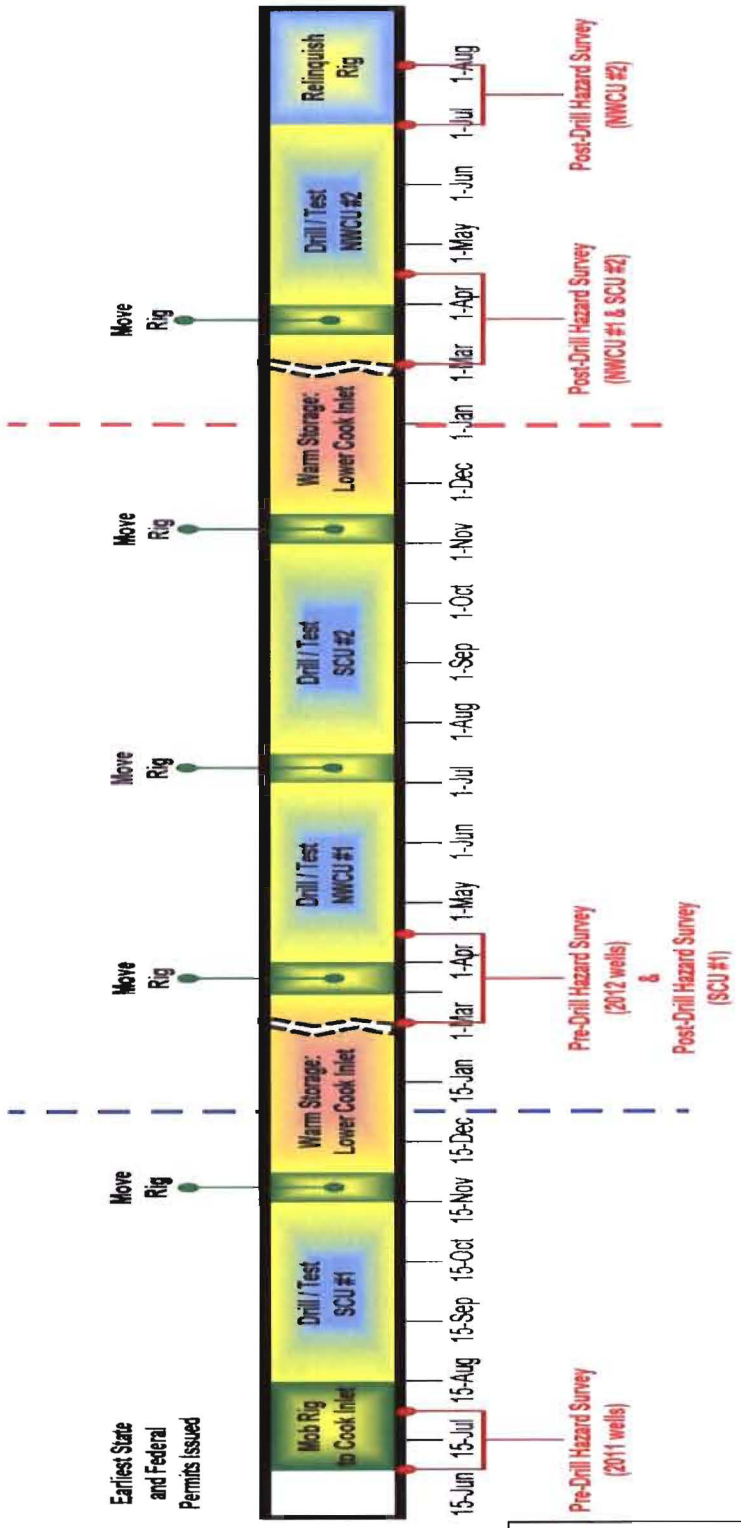

Figure 7
Project Schedule and Timeline